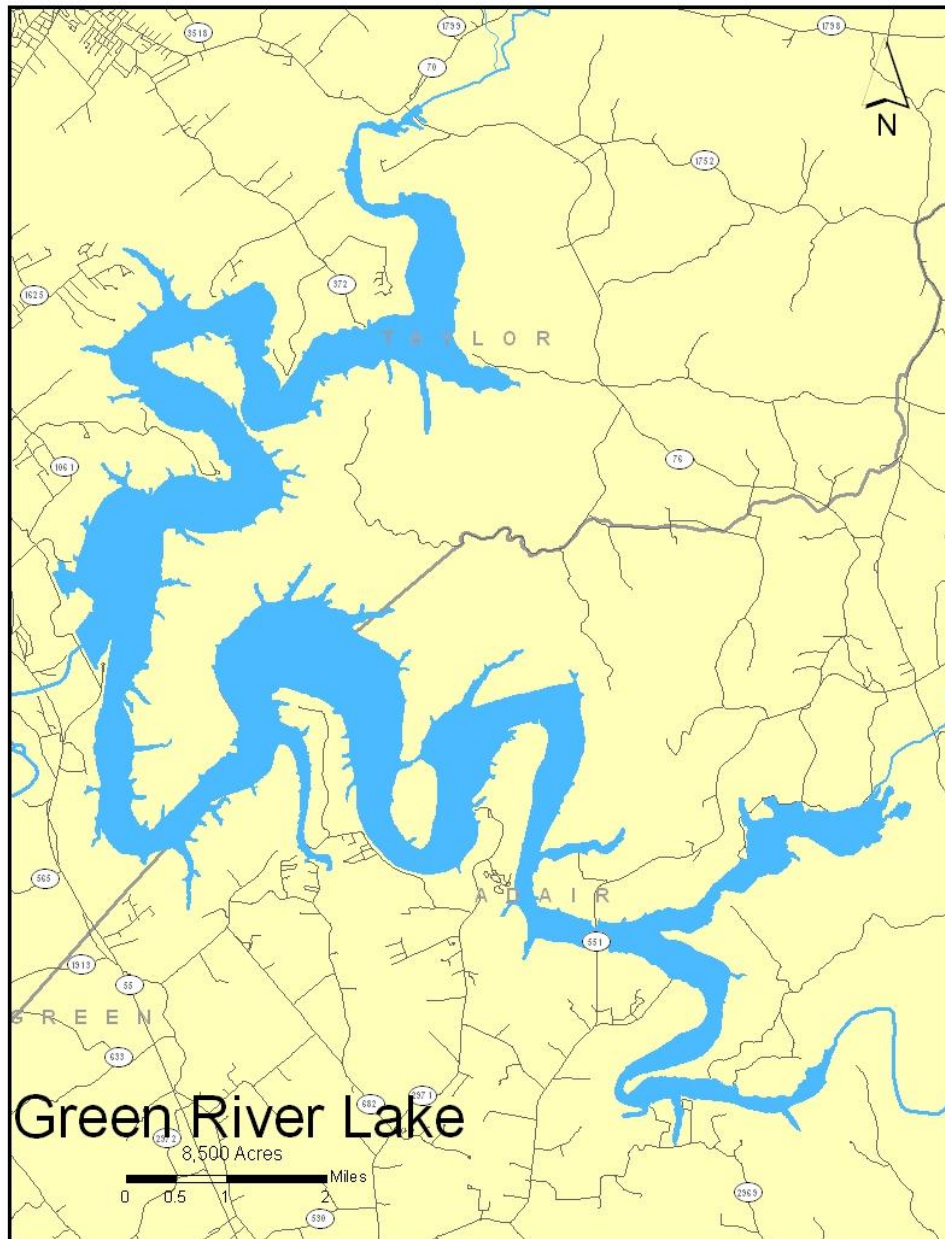


Green River Lake Bass Assessment 2013

Green River Lake is a 8,210-acre tributary impoundment of the upper Green River located in Taylor and Adair counties in south central Kentucky. Created in 1969, the lake serves primarily for flood control and water supply. Beginning in 2002, lake drawdown for flood control was reduced from 11-foot to 7-foot. Lake stratification occurs from mid-May to early-November with thermocline depths during the summer months ranging from 18 to 23 feet.



The upper halves of the lake's arms (Green River and Robinson Creek) are classified as moderately fertile with the lower third of each arm being slightly infertile. Gizzard shad are the dominate forage fish for largemouth bass; however, alewives are also present and seemingly heavily utilized by spotted bass.

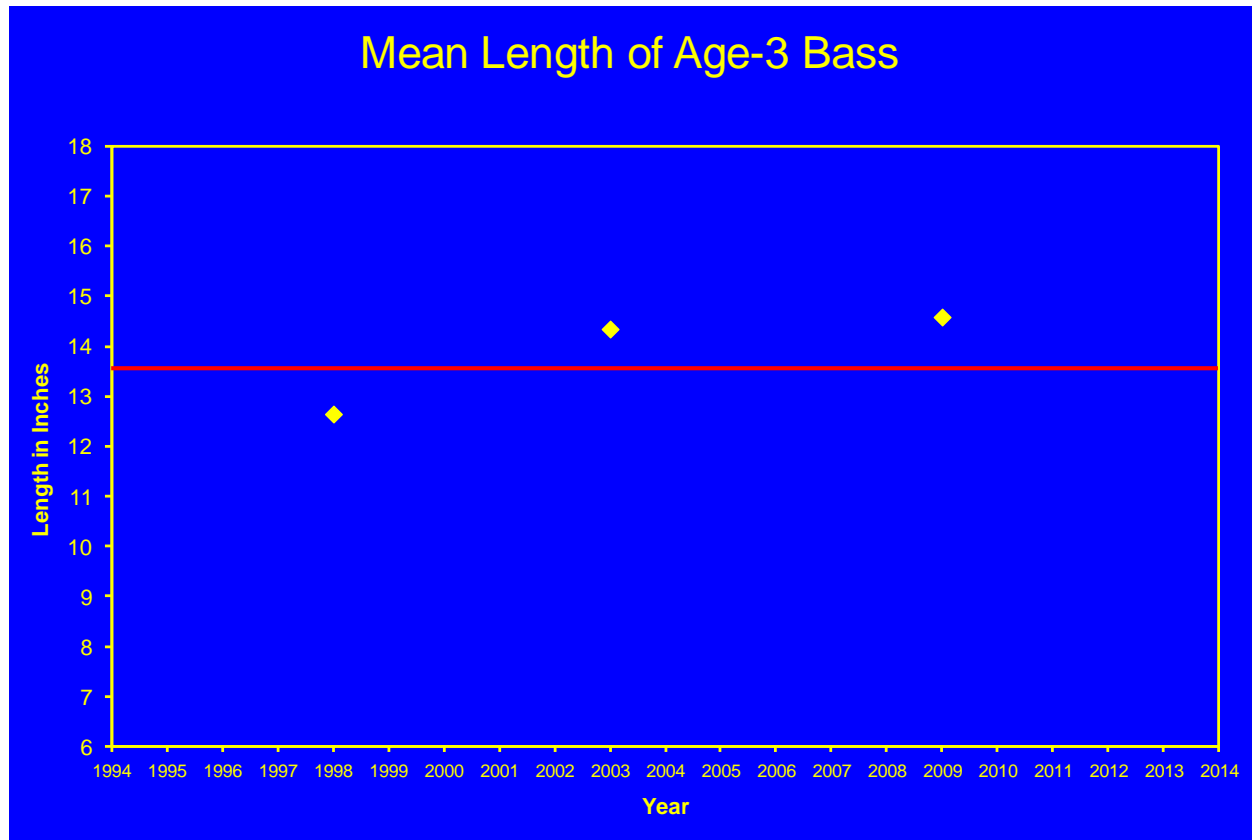
Largemouth bass have historically approximated 60-70% of bass angler catch and bass sampled by spring electrofishing. Spotted bass grow to good sizes in Green River Lake (15-17 inches) and at times account for a sizeable (20-40%) part of bass caught by anglers or electrofishing. Similarly, smallmouth grow to large sizes (20-inch plus), but only approximate 2-10% of bass population.

The following graphs show trends and rankings for each of the five population parameters used in the largemouth bass assessment. Please see "Understanding The Largemouth Bass Assessment" article for an explanation of how the assessment works.

Please note that the minimum size limit for largemouth and smallmouth bass on this lake is 12 inches. In 1995, 2010, and 2011 high water conditions made sampling unfeasible which explains the absence of data for those year's in this assessment. Additionally, 1994 and 1996 data were omitted as samples were collected too late to be comparable to other years.

Parameter 1 – Length at age-3 (growth rate)

Average length of an age-3 largemouth bass at Green River Lake is 13.2 inches. Largemouth growth rates have improved over the last ten years from 12.5 to 14.5 inches. The red line in the graph below represents the overall mean from the past 20 years. Compared to other large KY reservoirs, this is very good growth for largemouth bass.



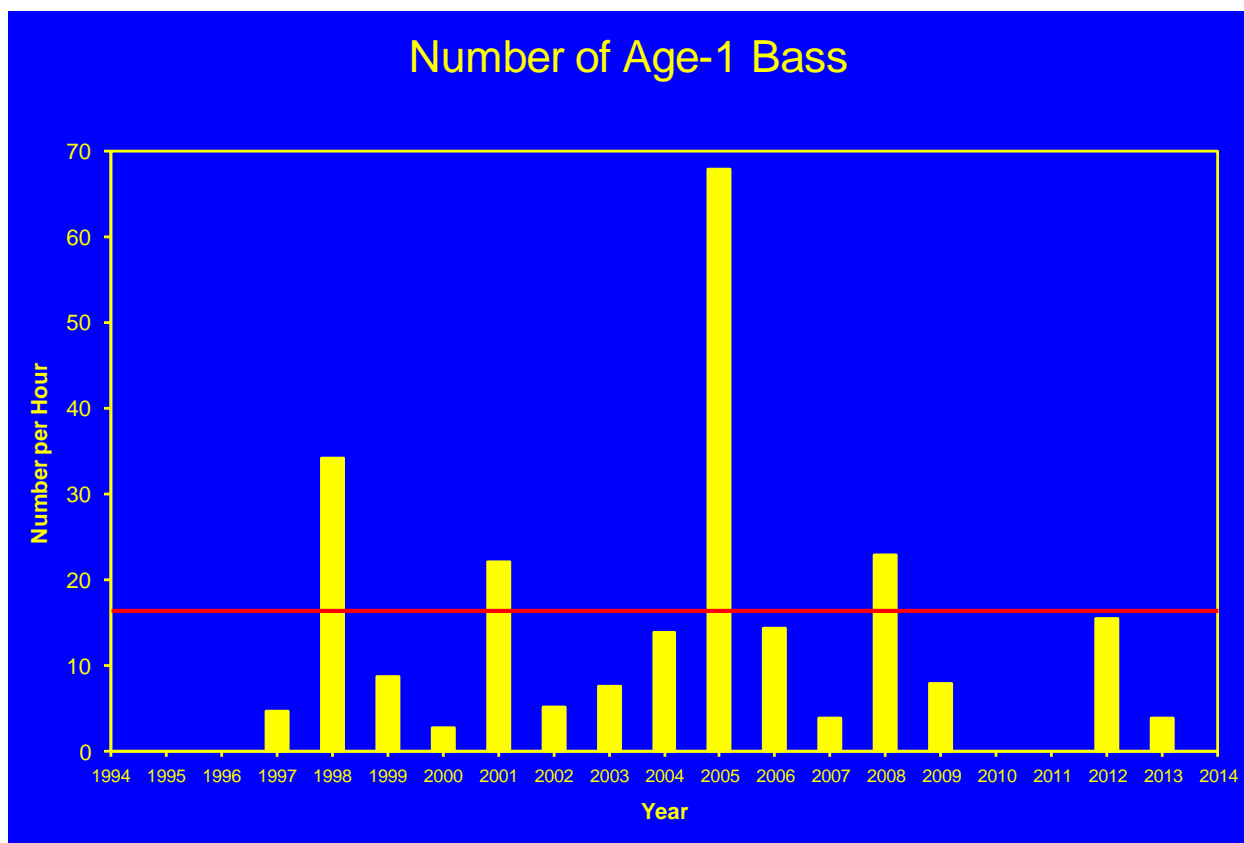
Parameter 2 – Numbers of age-1 bass (how good the spawn was)

Fishery biologists look at the electrofishing catch rates of age-1 largemouth bass to assess the success of the spawn which occurred in the previous year. This is an important parameter because the number of bass that make it age-1 often reflect how good the fishing will be once these fish grow large enough for anglers to catch.

At Green River Lake, age-1 largemouth bass catch rates have averaged just over 15 fish per hour of electrofishing. When compared to other large KY reservoirs, this is a low catch rate. As shown in the graph below, bass spawning success (age-1 catch rate) in Green River Lake is extremely variable.

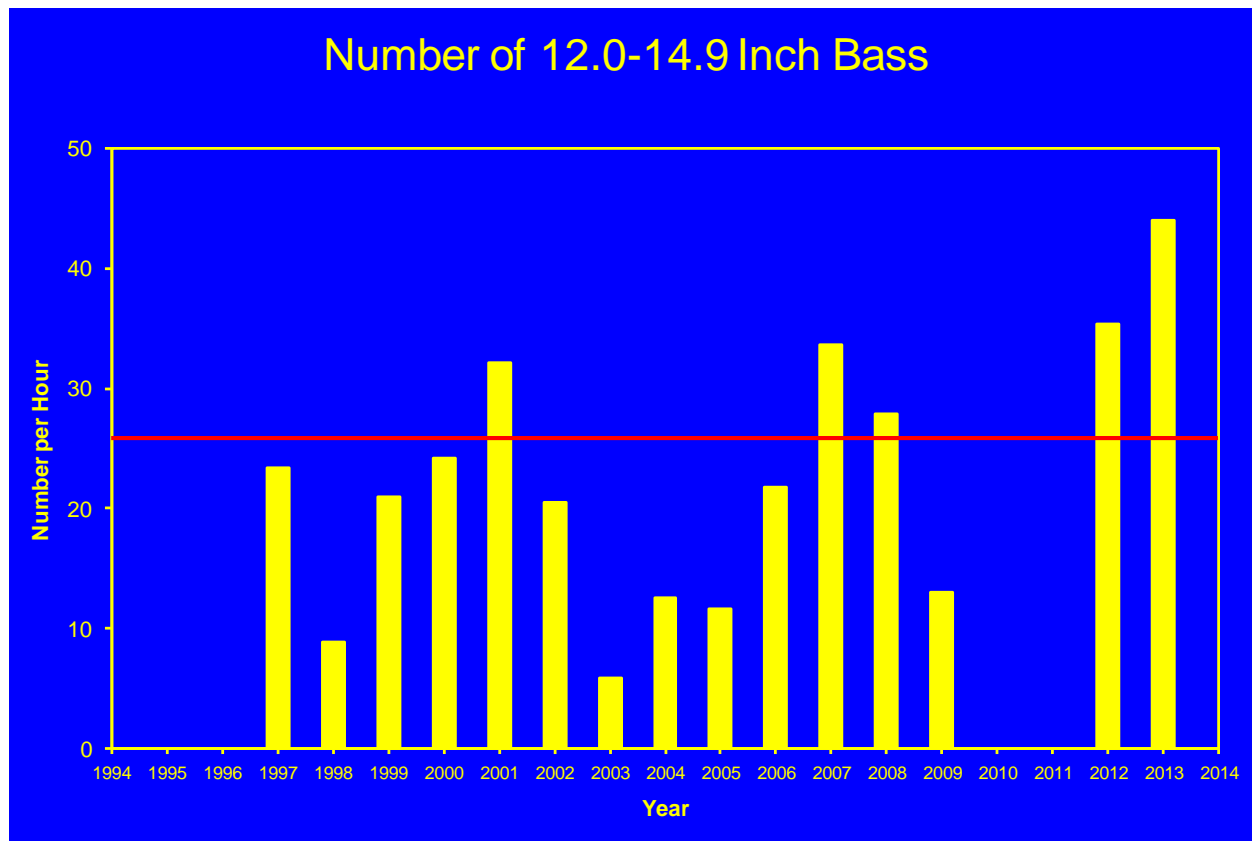
Lake water levels during that first year of life can be an important factor in bass spawning success and survival. Each of the year's (1997 and 2004) that preceded higher age-1 largemouth bass catch rates (1998 and 2005) had stable water levels during much of the spawning period (April –early June) and a prolonged period of elevated water levels following the spawning period (May – July). Years that had the poorest age-1 catch rates (1997, 2000, 2007 and 2013) were those where the previous year's water levels were very erratic (up & down throughout much of the spawning period).

Though no age-1 catch data was collected in 2011, it appears that the spawn from 2010 was well above average as seen from the catch rate of 12 – 14.9 inch bass on the next page.



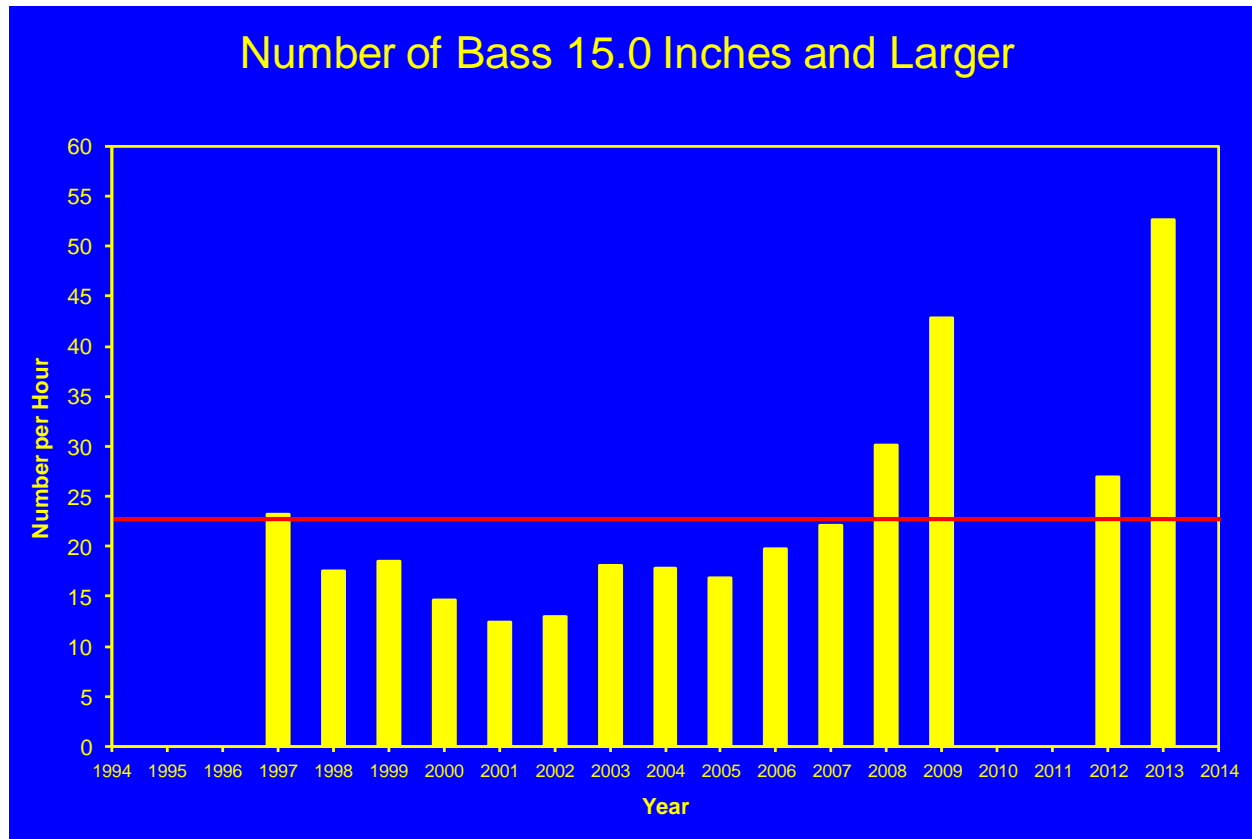
Parameter 3 – Numbers of 12.0-14.9 inch bass

Spring electrofishing catch rate for this size range of largemouth bass in 2013 was the highest we have seen at Green River Lake with the bulk of these fish already in the 14-inch size class. This number is important because most of these fish will have reached 15- inches and larger by the start of 2014. Looking ahead to 2014, this should be another excellent year for some quality-sized bass fishing.



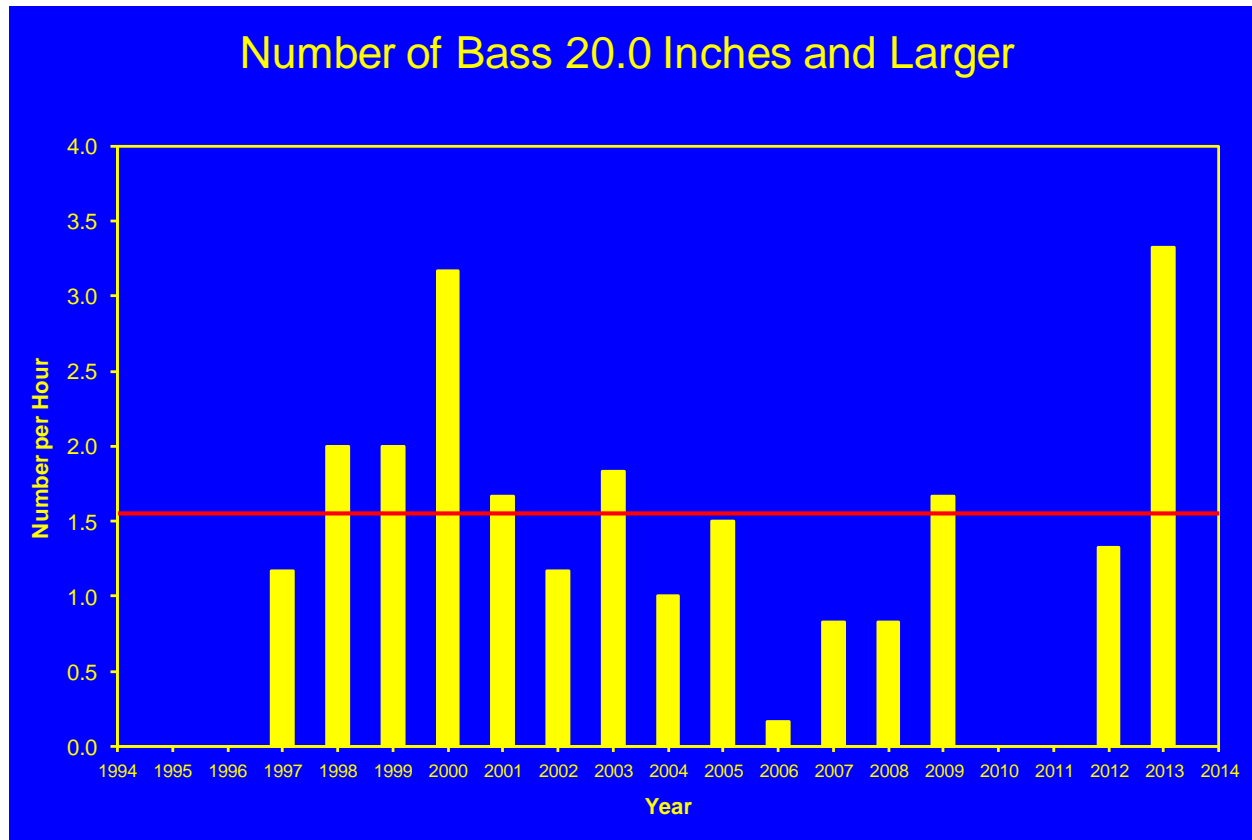
Parameter 4 – Numbers of 15 inch and larger bass

The electrofishing catch rate of 15-inch and larger largemouth bass in 2013 was the highest we have seen at Green River Lake. These numbers make Green River Lake one of top bass fishing destinations in Kentucky for 2014. Again, these numbers along with the good catch rate of bass between 12 and 14.9 inches will make for some very good bass fishing at Green River Lake over the next couple of years.



Parameter 5 – Numbers of 20-inch and larger bass

The electrofishing catch of 20.0 inch and larger largemouth bass is around 1.5 fish/hour. This catch rate gives the lake a fair rating historically compared to other large KY reservoirs. Largemouth bass in Green River Lake take at least 5-8 years to achieve 20 inches in length. As the good year classes (spawns) of 2007 and 2010 continue to achieve this size range, the next few years should be good ones to target and catch some trophy sized largemouth at Green River Lake.



Overall – Total Assessment Score (All five parameters added together)

Overall, the largemouth bass fishery at Green River Lake has averaged a good rating (13.2) over the years. In last couple of years, Green River Lake has achieved its highest ratings in the past 12 years. Again, with the excellent spawn of 2004 supplying the largest fish in the reservoir and the good spawns of 2007 and 2010 providing and sustaining above average numbers of largemouth bass, 2014 will be an exceptional year for quality to trophy sized bass.

